

NATURAL RESOURCE CONSERVATION SERVICE CONSERVATION PRACTICE STANDARD

BRUSH MANAGEMENT (Acre)

CODE 314

DEFINITION

Removal, reduction, or manipulation of non-herbaceous plants.

community's plant density, canopy cover, or height.

PURPOSES

- Restore natural plant community balance.
- Create the desired plant community.
- Restore desired vegetative cover to protect soils, control erosion, reduce sediment, improve water quality, and enhance stream flow.
- Maintain or enhance wildlife habitat including that associated with threatened and endangered species.
- Improve forage accessibility, quality and quantity for grazing livestock.
- Protect life and property from wildfire hazards.
- Improve visibility and access for handling livestock.

Brush management will be applied in a manner to achieve the desired control of the target woody species and protection of desired species. This will be accomplished by mechanical, chemical, biological, prescribed burning or a combination of these methods.

Prescribed Grazing and other needed practices shall be applied to ensure desired response from treatments.

Brush Management will be planned and designed in accordance with the 1990 MOU between IDF&G and NRCS.

Additional Criteria For Improving Wildlife Habitat.

Brush Management will be planned and applied in a manner to meet the habitat requirements of the wildlife species of concern.

Brush management will be planned in a manner that will not adversely affect threatened or endangered species or their habitats.

CONDITIONS WHERE THIS PRACTICE APPLIES

On rangeland, native pasture, pasture and hay and other lands where removal or reduction of excessive woody (non-herbaceous) plants is desired.

Additional Criteria For Reducing Wildfire Hazards.

Control undesirable woody plants in a manner that creates the desired plant community which reduces wildfire hazard conditions.

CRITERIA

General Criteria Applicable For All The Purposes Stated Above.

Brush management will be designed and applied to achieve the desired plant

CONSIDERATIONS

Timing and sequence of brush management in a pasture and/or the entire operating unit should be planned in coordination with the prescribed grazing plan.

Consider soil erosion potential and difficulty of vegetation establishment when choosing a method of control that causes soil disturbance.

Consider the economic return of brush management as related to production potential of the site.

When primary use is for domestic livestock, the objective may be to manipulate numbers, species, and distribution of brush to maximize forage production. Consider additional objectives for wildlife that may be to maintain more brush than is natural to the site and to manage the brush in a pattern on the land that favors both livestock and wildlife. Consider leaving odd areas and draws for shade, wildlife, landscape diversity, or esthetic value.

Where wildlife is the primary use brush should be manipulated to provide optimum wildlife habitat.

Consider the use of pest-control methods having the least potential hazard or adverse impact on man, animals, and the environment.

Contact all land management agencies in the immediate vicinity to determine if they have any brush management projects proposed that may influence decisions during the planning process.

When spraying with chemicals near riparian areas caution should be taken to avoid damage to riparian vegetation and protect water quality. Extreme caution needs to be exercised when using 2,4-D near any willows.

Conservationists are to (1) encourage cooperators to fully consider present and future land use opportunities in relation to brush management, including expected effect on wildlife habitat, potential recreation use, and attractiveness of the landscape; (2) determine that the landowner understands the technical requirements, possible hazards, and costs of the practice and the landowner will apply the kind of grazing management and maintenance measures that will insure success; and (3) help land users understand the environmental impacts of brush management, both positive and negative, onsite and offsite.

WATER QUANTITY CONSIDERATIONS

Consider the effects of improved vegetation on the water budget, especially on volumes and rates of infiltration and runoff.

Where applicable, consider the effects of snow catch and melt on the water budget.

Consider the potential for a change in plant growth and transpiration because of changes in the volume of soil water.

Consider the effects on downstream flows or aquifers that would affect other water uses or users.

WATER QUALITY CONSIDERATIONS

Consider effects of short-term soil disturbance on erosion and movement of sediment and soluble and sediment-attached substances carried by runoff.

PLANS AND SPECIFICATIONS

Shall include:

(1) dates or growth periods for effective treatment; (2) acceptable alternative materials, equipment, and methods; (3) types of areas, and kinds and amounts of brush and trees that should be favored for wildlife habitat, natural beauty, and recreation; (4) patterns and kinds of plants to be left and maintained for wildlife food and cover; and (5) grazing management to follow brush management treatment, and other maintenance needed.

Requirements for Brush Management Within Critical Sage Grouse Habitat

When brush management is proposed in sage grouse habitat, NRCS will incorporate the following guidelines into the planning process to help protect their habitat. The landowner will be notified that NRCS and/or Idaho Department of Fish and Game will need time (30 days) to locate critical areas such as leks, nesting, brood-rearing, and wintering areas during the planning process. As per the MOU between the IDF&G and NRCS, additional time may be requested by IDF&G to complete their inventory of the area. Some alternatives may be

proposed for the site if critical grouse habitat exists within the project area.

When working near an active lek, a 100 yard undisturbed buffer around the lek will be maintained. Overall planned treatment of sagebrush canopy will target 20 percent cover within 2 miles of the active lek and on all known critical wintering areas.

Brush management within 2 miles of an active lek will be treated in a mosaic or strip pattern to achieve the wildlife habitat objectives.

A strip of untreated sagebrush approximately 100 feet wide will be left on each side of perennial streams, meadows, and other riparian areas.

When 2,4-D treatments are proposed NRCS will provide treatment alternatives during plan development.

Brush management generally will not be considered on any species unless the percent by weight present significantly exceeds that listed as potential on the associated site description (approximately double the average listed in the site description).

An irregular buffer strip will be left along perennial streams, lakes, marshes and upland meadows. Willows in riparian areas will not be sprayed with 2,4-D.

Low volatile esters or other low volatile chemicals will be used on any brush management project where drift of chemical spray is of concern.

190-GM, May 1981, Part 404 Pesticides, 404.3(e) states that all NRCS personnel that provide pesticide guidance to the public are to be properly trained and certified as required by the appropriate State authority.

Plowing or Rotary Tiller Equipment

Equipment will be operated at depths sufficient to sever roots or crowns and at angles to ensure completely cutting roots to sufficiently remove or reduce plant competition to planned levels.

Time of operation will be in late spring or early summer when soil conditions are favorable for plowing.

Operation will be completed prior to any seed set of species being controlled during season of control.

Railing and Dragging Equipment

Any rail or object dragged must be heavy enough to sufficiently remove or reduce plant (brush species being controlled) composition capable of reproduction by 80 percent upon completion of operation.

Operation will be completed prior to any seed set of species being controlled during season of control.

Chaining Equipment

Heavy anchor chains of at least 75-150 pounds per link will be used. A swivel will be used where connected to tractors to allow for tumbling and turning of chain.

Number of operations will be sufficient to remove or reduce plant (brush species being controlled) composition capable of reproduction by 80 percent upon completion of operation.

Operations will be completed prior to any seed set of species being controlled during season of control.

This method of control will not be used on any sprouting species except on areas of land being treated where primary use of land is by wildlife.

Beating Equipment

Flail type rotary and circular beaters and saw type equipment can be used.

Equipment will be set to operate about 4 inches (+/- 2 inches) above the ground level and sufficient to remove or reduce plant (brush species being controlled) composition capable of reproduction by 80 percent upon completion of operation.

Operation will be completed prior to any seed set of species being controlled during season of control.

This method of control will not be used on any sprouting species except on areas of land being treated where primary use of land is by wildlife.

Prescribed Burning

Use specification for Prescribed Burning (338).

Chemical Equipment

Helicopter, fixed wing, ground moving or hand spraying equipment can be used.

Fixed wing or helicopter can be used when wind speeds are not generally exceeding 7 miles per hour. (Exception: Pelletized chemicals may be applied at higher wind speeds; however, operation of equipment safety must be of top concern).

Ground moving equipment can be used with wind speeds up to or generally not exceeding 10 miles per hour.

Rates and timing of application must be such that plant (brush species being controlled) composition capable of reproduction are reduced by 80 percent by the beginning of the following growing season.

All brush management areas treated by early summer will be deferred from grazing until seed ripe of key species the year the practice is installed.

All brush management areas treated from early summer through fall and winter will be followed by deferment until seed ripe of key species the following year.

Plans and specifications will be prepared for each pasture, field, or management unit where Brush Management will be applied.

Mechanical, chemical, and biological procedures and prescribed burning may be used singly or in combination, depending on such factors as (1) kind of land (site); (2) topography; (3) species of woody plants-whether they are root-sprouters or non-sprouters; (4) size, abundance, and

distribution of woody plants; (5) hazards of treatment, if any; (6) objectives of the land user; and (7) costs in relation to expected benefits.

Plans and specifications will be based on the practice standard and may include narratives, maps, drawings, job sheets, or similar documents. These documents will contain the following data as a minimum:

Brush canopy and/or species count, transect line locations and percent canopy and/or species numbers per acre of the target plant(s).

As needed, maps or drawings showing areas to be treated and areas to be left undisturbed should be prepared.

For mechanical treatment methods, plans and specifications will include types of equipment and any modifications necessary to enable the equipment to adequately complete the job. Also included should be:

- Dates of treatment
- Operating instructions
- Techniques or procedures to be followed

For chemical treatment methods, plans and specifications will include:

- Herbicide name
- Rate of application or spray volumes
- Acceptable dates of application
- Mixing instructions (if applicable)
- Any special application techniques, timing considerations, or other factors that must be considered to ensure the safest, most effective application of the herbicide
- Reference to label instructions.
- Documentation of the use of environmental risk analysis tools (such as WIN-PST Soil Pesticide Interaction Loss Potential and Hazard Rating Report) in formulating alternatives with the client.

For biological treatment methods, plans and specifications will include:

- Kind of biological agent or grazing animal to be used
- Timing, duration, and intensity of grazing or browsing
- Desired degree of grazing or browsing use for effective control of target species
- Maximum allowable degree of use on desirable non-target species
- Special precautions or requirements when using insects or plants as control agents

OPERATION AND MAINTENANCE

Operations

Brush Management practices shall be applied using approved materials and procedures. Operations will comply with all local, state, and federal laws and ordinances.

Success of the practice shall be determined by evaluating re-growth or reoccurrence of target species after sufficient time has passed to monitor the situation and gather reliable data. Evaluation periods will depend on the methods and materials used.

Maintenance

Following initial application, some re-growth, re-sprouting, or reoccurrence of brush should be expected. Spot treatment of individual plants or areas needing re-treatment should be done as needed.